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REMARKS

The claims have been amended to delete all multiple dependencies, and to generally place the claims in better form for US practice.

Attached is the search report of the corresponding PCT application, together with copies of the references cited therein, which are listed on the attached Form PTO-1449.

Respectfully submitted,



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APPENDIX

IN THE CLAIMS:

8. (Amended) A device according to claim 1 [or claim 7], characterized in that said surfaces (4a-4b, 6a-6b, ..., 14a-14b) present wettability that is controlled by surface treatment.

9. (Amended) A device according to [anyone of claims 1 to 8] claim 1, characterized in that at least one of the two faces of a pair of surfaces (4a-4b, 6a-6b, ..., 14a-14b) is carried by a structure in the form of a mesa (22a, 22b) formed on its respective substrate (2a, 2b), said mesa-forming structure causing said surfaces to be closer together than the respective substrates, so that capillarity maintains the liquid selectively in the zones where the faces are closer together.

10. (Amended) A device according to [anyone of claims 1 to 9] claim 1, characterized in that the two faces of a pair of surfaces (4a-4b, 6a-6b, ..., 14a-14b) are substantially parallel.

11. (Amended) A device according to [anyone of claims 1 to 10] claim 1, characterized in that the two faces of a pair of surfaces form between them a small angle (α), thus creating a zone towards one edge of said faces (4-1, 6-1) that is closer together than an opposite zone (4-2, 6-2), thus

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enabling liquid to be entrained by capillarity towards said closer-together zone.

13. (Amended) A device according to [anyone of claims 1 to 10] claim 1, characterized in that at least one of the pairs of close together surfaces presents a plurality of planes (4a', 4a'') SO as to create a plurality of different spacings (e1, e2) between said close-together surfaces.

15. (Amended) A device according to [anyone of claims 1 to 14] claim 1, characterized in that at least one pair of close-together surfaces (4a, 4b) forms at least one reservoir, a separation pad (6a, 6b) , and a pad (8a, 8b) for forming a small drop of liquid, co-operating to constitute an extractor for said small volume.

16. (Amended) A device according to claim 1 [or claim 15], characterized in that said reservoir (4a, 4b) comprises a confinement volume operating by capillary action and interface tension between two close-together surfaces, at least one sector of the periphery of a liquid-retaining zone constituting extractor-forming means and at least one face of the retaining zone being connected to liquid feed means.

18. (Amended) A device according to [anyone of claims 1 to 17] claim 1, characterized in that the displacement path (18-1, 18-2, 18-3) for moving calibrated volumes of liquid is constituted by a zone for retaining liquid by capillary and

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surface tension action between two close-together faces, such that the width of said retaining zone relative to the displacement path axis is of a dimension that is substantially greater than that of the extractor to which it is connected, the faces forming said zone being provided with electrodes that enable a distributable electric field to be created for receiving at least one calibrated quantity of liquid extracted from the reservoir by the action of the extractor.

19. (Amended) A device according to [anyone of claims 1 to 18] claim 1, characterized in that it is made up of at least two displacement paths (18-1, 18-2) enabling calibrated quantities 1, 2, 3, ..., N of liquids to be extracted from at least two reservoirs and conveyed towards at least one other path internal to the device, the calibrated quantities 1 to N not necessarily having the same volume.

21. (Amended) A device according to [anyone of claims 1 to 20] claim 1, characterized in that it comprises at least two reservoirs arranged in such a manner as to enable the calibrated small volumes extracted from said reservoirs to be combined and mixed together, and at least one displacement path for conveying them to a destination zone.

22. (Amended) A device according to [anyone of claims 1 to 20] claim 1, characterized in that the or each reservoir and each pair of close-together surfaces of said displacement

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path are configured to create relaxation of the perimeter of the liquid in the absence of an electric field so as to facilitate the passage of said liquid from one pair of surfaces to another.

23. (Amended) A device [acorn] according to [anyone of claims 1 to 22] claim 1, characterized in that at least one of the reservoirs contains a rinsing liquid suitable for cleaning the displacement path(s) for moving calibrated small volumes of liquid.

24. (Amended) A device according to [anyone of claims 1 to 23] claim 1, characterized in that it is arranged to be fed from at least one extractable reservoir (42), said reservoir being in the form of a cartridge or the like, for example.

25. (Amended) An assembly for diffusing liquid in the form of small volumes, the assembly being characterized in that it integrates in a common package:

- at least one device (1) for forming, moving, and diffusing drops according to [anyone of claims 1 to 24] claim 1;
- control electronics for generating electrical potentials (39, 46) for delivering control signals in programmable manner to the means for applying an electric field;
- at least one reservoir (4a, 4b) of liquid to be diffused; and

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· an electrical power supply source (38), e.g, constituted
by an optionally rechargeable battery.